



To the Honorable Commissioner of Patents

101816614

Send original documents or copy thereof.

1 Name of conveying party(ies):

Lu-Chang Chen

08/10/01

2 Name and address of receiving party(ies):

Taiwan Semiconductor Manufacturing Co. Ltd.  
No. 121 Park Avenue 3  
Science-Based Industrial Park  
Hsin-Chu, Taiwan, R.O.C.

3 Nature of conveyance:

- Assignment  Merger
- Security Agreement  Change of Name
- Other:

Execution Date: June 6, 2001

Additional name(s) & address(es) attached  Yes  No

1002 U.S. PTO  
09/927959  
08/10/01

4 Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: 06-06-01

A. Patent Application No(s).

09/927959

B. Patent No(s)

Additional numbers attached?  Yes  No

5 Name and address of party to whom correspondence concerning document should be mailed:

RANDY W. TUNG  
Tung & Associates  
838 W. Long Lake Road  
Suite 120  
Bloomfield Hills, Michigan 48302

6 Total number of applications and patents involved:

1

7 Total fee (37 CFR 3.41)

\$40.00

- Enclosed
- Authorized to be charged to deposit account

8 Deposit Account Number: 50-0484

(Attach duplicate copy of this page if paying by deposit account)

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02 FC:501 40.00 DP

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9 Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Randy W. Tung  
Name of Person Signing  
Registration No. 31,311

Signature

Aug. 10, 2001  
Date

Total number of pages including cover sheet, attachments, and document : 3

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

ASSIGNMENT

WHEREAS, I, LU-CHANG CHEN have invented certain improvements in

METHOD AND APPARATUS FOR AVOIDING DRIVER GAS

CONTAMINATION IN AN ION IMPLANTER GAS SUPPLY MODULE

for which I am about to make application for Letters Patent of the United States; and

WHEREAS, TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD. of

No. 121, Park Avenue 3, Science-Based Industrial Park, Hsin-Chu, Taiwan, R.O.C, is desirous of acquiring the entire right, title and interest in and to said invention;

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, I, LU-CHANG CHEN by these presents, do hereby sell, assign and transfer unto the said corporation and its assigns, for the territory of the United States of America and all foreign countries, the entire right, title and interest, including all priority rights under the International Convention associated with each country of the Union, in and to said invention as described in the patent application executed by me on the 6<sup>th</sup> day of June, 2001, preparatory to obtaining Letters Patent of the United States thereon, and in and to said application and any Letters Patent that may be granted in pursuance of said application and any divisional, continuation or continuation-in-part application thereof, and in and to any reissue of any such patent, and in and to any patent applications which may be filed on said invention in countries foreign to the United States and any Letters Patent granted thereon.

I further authorize said corporation to apply for foreign patents on said invention in its own name or through its designees, including subsidiaries, related companies or assignees, under the International Convention or otherwise, and I further agree to execute all papers, including those required for the United States and foreign applications, and to perform such other proper acts as said corporation or its designees the rights herein assigned.

  
\_\_\_\_\_  
LU-CHANG CHEN

**TUNG & ASSOCIATES**  
**838 W. Long Lake Road**  
**Suite 120**  
**Bloomfield Hills, Michigan 48302**